WHAT IS CLAIMED IS:

1   1.   A system for clinical trial simulation, comprising:

2   an interface having a fixed form module and a free form module, the

3   interface configured to receive information that describes a trial protocol for a

4   clinical trial simulation;

5   a translator having a protocol parser and a code generator, the protocol

6   parser configured to parse the trial protocol, the code generator configured to

7   generate source code in a general purpose programming language;

8   a compiler having a code parser and a machine code generator, the

9   compiler configured to compile the generated source code into an executable

10   program; and

11   a controller communicatively coupled with the interface, the translator,

12   and the compiler, the controller configured to run the executable program.

1   2.   The system of claim 1, wherein the fixed form module is configured to receive

2   trail protocol information conforming to a structured format.

1   3.   The system of claim 2, wherein the free form module is configured to receive trial

2   protocol information conforming to a trial design language.

1   4.   The system of claim 1, wherein the trial protocol comprises a plurality of

2   schedules.

1   5.   The system of claim 4, wherein the plurality of schedules comprises a dosing

2   schedule.

1   6.   The system of claim 4, wherein the plurality of schedules comprises an

2   observation schedule.

1   7.   The system of claim 6, wherein the executable program comprises a plurality of

2   programmable state machines.

1   8.   The system of claim 7, wherein each state machine corresponds to a discrete one

2   of the plurality of schedules.

1   9.   A method for clinical trial simulation, comprising:

2   receiving trial protocol information that describes a clinical trial

3   simulation;

4   arranging the trial protocol information into a plurality of schedules;

5   translating the plurality of schedules into a general purpose, high level

6   programming language;

7   compiling the translated plurality of schedules into an executable program;

8   and

9   executing the program as part of the clinical trial simulation.

1   10.   The method of claim 9, wherein the receiving step comprises:

2   receiving trial protocol information that conforms to a structured format;

3   and

4   receiving trial protocol information that conforms to a trial design

5   language.

1   11.   The method of claim 9, wherein the plurality of schedules comprises a dosing

2   schedule.

1   12.   The method of claim 9, wherein the plurality of schedules comprises an

2   observation schedule.

1   13.   The method of claim 9, wherein the executable program comprises a plurality of

2   state machines, each state machine corresponding to a discrete one of the plurality

3   of schedules.

1   14.   A computer readable medium having stored thereon one or more sequences of

2   instructions for causing one or more microprocessors to perform the steps for

3   simulating a clinical trail, the steps comprising:

4   receiving trial protocol information that describes a clinical trial

5   simulation;

6   arranging the trial protocol information into a plurality of schedules;

7   translating the plurality of schedules into a general purpose, high level

8   programming language;

9   compiling the translated plurality of schedules into an executable program;

10   and

11   executing the program as part of the clinical trial simulation.

1   15.   The computer readable medium of claim 14, wherein the receiving step

2   comprises:

3   receiving trial protocol information that conforms to a structured format;

4   and

5   receiving trial protocol information that conforms to a trial design

6   language.

1   16.   The computer readable medium of claim 14, wherein the plurality of schedules

2   comprises a dosing schedule.

1   17.   The computer readable medium of claim 14, wherein the plurality of schedules

2   comprises an observation schedule.

1   18.   The computer readable medium of claim 14, wherein the executable program

2   comprises a plurality of state machines, each state machine corresponding to a

3   discrete one of the plurality of schedules.

1   19.   A system comprising a microprocessor, a persistent storage area, a volatile

2   storage area and a communication means, the system including an execution area

3   configured to simulate a clinical trial by performing the following steps:

4   receiving trial protocol information that describes a clinical trial

5   simulation;

6   arranging the trial protocol information into a plurality of schedules, the

7   plurality of schedules comprising a dosing schedule and an observation schedule;

8   translating each of the plurality of schedules into a general purpose, high

9   level programming language;

10   compiling the translated schedules into an executable program, the

11   executable program comprising a plurality of programmable state machines, each

12   state machine corresponding to a discrete one of the plurality of schedules; and

13   executing the program as part of the clinical trial simulation.